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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/634,593	08/04/2003	Midori Takano	2102487-991270	6518

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EXAMINER

WELLS, KENNETH B

ART UNIT PAPER NUMBER

2816

DATE MAILED: 07/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

10/634,593

Applicant(s)

TAKANO, MIDORI

Examiner

Kenneth B. Wells

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/4/03
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

2. The disclosure is objected to because of the following informalities: throughout the specification, the phrase "adjusted to" is grammatically improper and should be changed to --synchronized with--. Note that the same change is needed throughout the claims.

Appropriate correction is required.

3. Claims 1-20 are objected to because of the following informalities: in claim 1, line 4, --said-- should be inserted before the word "differential". Also, there are numerous grammatical errors throughout the claims that should also be removed by applicant.

Appropriate correction is required.

4. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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In claim 1, it is misdescriptive, and thus indefinite, to recite that the edges of the differential clock signals are slewed, i.e., it is the output signals of the mixer 52 that are slewed by the integrator, not the edges of the differential clock signals.

Also in claim 1, it is incorrect to recite that the duty correction signals are fed back to the differential clock signals, i.e., signals are not fed back to other signals, they are fed back to circuit elements.

Finally in claim 1, it is indefinite to recite that the function of the controller is "to ensure operations of an amplitude of the output buffer and the data read circuit". This language makes no sense, and, moreover, it is improper because it is not the actual function of the controller (it is instead merely the result or outcome of the circuit). Applicant should delete this language and insert the actual function performed by the controller 71 in instant Fig. 3. For example, it outputs one or more control signals to the integrator in order to control one or more characteristics of the integrator.

The other independent claims are seen to include the same indefiniteness problems as noted above with regard to claim 1 and, as such, should also be corrected in response to this office action.

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It is also noted that in claim 8, line 3, "a sixth operational amplifier" lacks antecedent basis because claim 1 (from which claim 8 depends) does not recite any first through fifth operational amplifiers.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Lee et al.

Note Fig. 1, where the recited "integrator" reads on the combination of capacitor 30 and the parallel-connected clamp circuit (it receives the differential clock signals output from amplifier 10); the recited "output buffer" reads amplifier 40; the recited "duty cycle correction circuit" reads on circuit 20; and the recited "controller" reads on amplifier 10. The language on the last four lines of claim 1 (and also lines 9-11) is indefinite and thus cannot be relied upon to define over Lee et al. Moreover, it appears that the Fig. 1 circuit is capable of performing the recited operation (to the extent it can be

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understood). The phrase "phase interpolator for adjusting (synchronizing) the phase of differential clock signals of a receiver..." in the preamble is merely intended use and has not been accorded patentable weight. In any case, since the circuitry of Lee et al's Fig. 1 is capable of performing this intended use, the claim is fully anticipated.

6. Claims 9-20 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Claims 2-8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth B. Wells whose telephone number is (571)272-1757. The examiner can normally be reached on Monday through Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan, can be reached at (571)272-1740. The fax phone number for the

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organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Kenneth B. Wells
Primary Examiner
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July 22, 2004